DOCUMENT RESUME

ED 208 748 HE 014 443

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TITLE Using Simulation Games in the College Classroom. Idea Paper No. 5.
INSTITUTION Kansas State Univ., Manhattan. Center for Faculty Evaluation and Development in Higher Education.
PUB DATE Apr 81
NOTE 6p.; Not available in paper copy due to small print.
AVAILABLE FROM Center for Faculty Evaluation and Development, Kansas State University, 1623 Anderson Avenue, Manhattan, KS 66502.

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Affective Objectives; Cognitive Objectives; *College Instruction; *Criminology; *Decision Making; *Educational Games; Game Theory; Higher Education; *Simulation; Situational Tests; *Teaching Methods
IDENTIFIERS *Prisoners Dilemma Game

ABSTRACT

The use of simulation games is considered by which the college teacher addresses selected topics by having students engage in activities that approximate the realities of a social situation. Simulations offer a stimulus for examining theoretical models and their applicability to everyday social situations. The Prisoner's Dilemma is presented as an example of a frame game, or a game that can be played with a changed scenario and payoff chart while allowing essentially the same preparation, rules, and strategy for introducing, running, and debriefing. The Prisoner's Dilemma presents a situation where pairs of players must decide what they will do as prisoners: confess or not confess to a crime that they are accused of committing together. The players make their decisions independently and without knowing what the other will decide. The players make 10 separate decisions while sitting back-to-back during 10 rounds of play. Among the cognitive objectives of the game are: to learn that under the American criminal justice system a person can often obtain a reduced sentence by turning state's evidence and bargaining for leniency; to learn that the pursuit of one's own self-interest does not necessarily lead to social benefit; and to learn that people who make the same decisions often have different reasons for those decisions. Affective objectives are to feel the effects of restricted communication when making decisions directly involving other people and to discover that under pressure they may behave in a way that they normally find morally objectionable. A checklist for using games for instructional purposes is included. (SW)

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ED208748

IDEA PAPER No. 5

Center for Faculty Evaluation and Development
in Higher Education
Kansas State University

April 1981

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iDEA PAPER No. 5
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Using Simulation Games in the College Classroom

Ronald T. Hyman, Rutgers University

Perhaps the fundamental justification for employing a simulation game as a teaching strategy is to allow teacher and students to continue using in the classroom the very method they have used all their lives to gain knowledge of themselves and others. Simulation games can present a carefully designed, limited framework in which the teacher teaches selected topics by having students engage in activities which approximate the realities of a social situation.

With some planning, strategic execution, and some desire for innovation it is fairly easy to incorporate simulation games into a college course. The point here is that college simulation games can offer a great deal to college faculty. Simulations offer an inexpensive and intriguing vehicle for bringing issues alive in the classroom. Simulations offer a springboard for examining theoretical models and their applicability to everyday social situations. Simulations offer a method of involving students actively in "failure-proof decision-making" and in analyzing the consequences of this process.

The well-known simulation games Star Power, Bafa Bafa, and Simsoc are but three examples of simulations which have established themselves as classic human-to-human interaction activities. These three simulations are appropriate for courses in the fields of political science/history, anthropology/sociology, and sociology/psychology, respectively. Hundreds of simulations are available for these and other disciplines and can easily be located by checking several standard references which describe and categorize the games according to subject matter area.

Faculty need not rely on outside experts or special-order materials to be successful once an understanding of the simulation process is acquired. However, whether the instructor opts to use a game from the professional literature or to design his/her own, a check of the following points is wise.

Game Checklist

1) The game should be playable--easy to learn and easy to play.
2) The game should be realistic--simulate the essential elements of a real situation.
3) The game should be easy to understand, yet complex enough to be challenging.
4) The game should be short enough to allow playing it in available teaching time.
5) The game should allow some freedom in specifying how participants will play.
6) The game should allow for a balance between skill and luck. These elements should be in real-life proportions unless there is a particular purpose for emphasizing one over the other.

The teacher must be alert to the various demands of a simulation which sometimes necessitate special grouping of students, use of space and facilities, and/or special teaching aids. At the same time, since simulation involves much spontaneous speaking and doing, the teacher must have thought through the entire activity and be prepared to facilitate the activity at each step.

The steps outlining the use of the Prisoner's Dilemma example provide a model which can be generalized for use with other simulation games. The example serves primarily as a vehicle from which important elements of simulation games can be illustrated. Teachers interested in using the Prisoner's Dilemma can also read Simulation Gaming for Values Education: The Prisoner's Dilemma by Ronald T. Hyman (Washington, D.C.: University Press of America, 1978).

Simulation Example: The Prisoner's Dilemma

The Prisoner's Dilemma has been chosen as an example because it is an excellent frame game. A frame game is one which can be played with a changed scenario and payoff chart while allowing essentially the same preparation, rules, and step-by-step strategy for introducing, running, and debriefing. Other scenarios are available.

Scenario for The Prisoner's Dilemma

A police officer stops a car with a driver and passenger for speeding just minutes after learning of an armed robbery in the neighborhood. The police officer notices the handle of a revolver sticking out of the belt of each person. The officer asks to see their permits to carry the guns. When they fail to produce the permits, the officer arrests them and brings them back to the police station for booking and questioning.

At the station a detective separates the two people and notifies them of their constitutional rights. The detective suspects but cannot prove that they are involved in the armed robbery and gives them the choice to confess or not to confess to the crime. The prisoners have no communication with each other. However, the detective tells each of them that if they both confess to the armed robbery and plead guilty, the police will ask the prosecutor to recommend to the judge that they receive a prison term of 2-3 years each, which is less than the maximum sentence. Also, if one person confesses and pleads guilty and one does not, then the confessor will probably be able to plea bargain for a sentence, in exchange for turning state's evidence, of only 6-12 months. However, the police will "slap the book" at the nonconfessor for a sentence of 3-5 years. Both persons realize that if neither of them confesses, the detective probably will not be able to prove them guilty of armed robbery and will book them for illegal possession of weapons for which they each will get a relatively moderate punishment of 18 months.

Instructional Objectives

As with every well-designed simulation game, there are many objectives which may be achieved through use of the Prisoner's Dilemma. The objectives listed below are only a few of those that are appropriate.

General Objectives--The students will:

1) simulate the feelings and actions of persons in a dilemma situation asked to decide between two opposite choices after being arrested.

2) understand cognitively and emotionally part of our criminal justice system and the role of effective communication in interpersonal relations.

Cognitive Objectives--The students will:

1) learn that under the American criminal justice system a person can often obtain a reduced sentence by turning state's evidence and bargaining for leniency.

2) learn the importance of asserting their Constitutional rights to have a lawyer counsel them.

3) learn that the pursuit of one's own self-interest does not necessarily lead to social benefit.

4) learn that people who make the same decisions often have different reasons for those decisions.

Affective Objectives--The students will:

1) feel the effects of restricted communication and of open face-to-face communication when making decisions directly involving other people.

2) discover that under pressure they may behave in a way which they normally find morally objectionable.

The Game Model

The Prisoner's Dilemma presents a situation where pairs of players must decide what they will do as prisoners--confess or not confess to a crime which they are accused of committing together. The players make their decisions independently and without knowing what the other will decide. The recommended number of participants is 6-40 students for a total of 3 to 20 pairs.

There is no time limit in this simulation and the action moves quickly. The players make 10 separate decisions while sitting back-to-back during 10 rounds of play. After each decision, students pass notes to each other announcing "confessed" or "did not confess." Each student records his own and his partner's decision and resulting penalties on a Record Sheet for each of the 10 rounds. Then players confer face-to-face for 3-5 minutes about what has so far happened. The players then repeat the first part, making 10 more separate decisions sitting back-to-back.

After the 20th round, the players each complete the sentence using either three different words or phrases: The other player was _____. This is to give the players feedback on their impressions of each other. The players exchange papers with the sentences on them and talk to each other for a few minutes about all that has happened. After this conference period, the debriefing led by the teacher begins.

Summary of Probable Penalties after Conviction: Jail Time

1) If both prisoners do not confess, they each get 18 months.

2) If both prisoners confess, they each get 2-3 years.

3) If one prisoner confesses and turns state's evidence and one does not, then the confessor gets 6-12 months and the nonconfessor gets 3-5 years.

Payoff Chart: Time in Jail

		PRISONER A: NOT CONFESS	PRISONER A: CONFESS
PRISONER B	NOT CONFESS	18 MONTHS EACH	6-12 MONTHS - A 3-5 YEARS - B
PRISONER B	CONFESS	3-5 YEARS - A 6-12 MONTHS- B	2-3 YEARS EACH

Sample Student Record Sheet

	My Choice	Other's Choice	My Penalty	Other's Penalty
1	NC	C	3-5 Yrs.	6-12 Mos.
2	NC	C	3-5 Yrs.	6-12 Mos.
3	NC	C	3-5 Yrs.	6-12 Mos.
4	C	C	2-3 Yrs.	2-3 Yrs.
5	C	C	2-3 Yrs.	2-3 Yrs.
6	NC	C	3-5 Yrs.	6-12 Mos.
7	NC	C	3-5 Yrs.	6-12 Mos.
8	NC	C	3-5 Yrs.	6-12 Mos.
9	NC	C	3-5 Yrs.	6-12 Mos.
10	C	C	2-3 Yrs.	2-3 Yrs.

NC = Not Confess C = Confess

Preparing for The Prisoner's Dilemma

Reread the simulation's objectives and rules. Prepare student materials. (All that a student needs for this game is a pencil, scrap paper, a copy of the Scenario and Payoff Chart, and a Record Sheet.) Plan for the use of time. The Prisoner's Dilemma takes about one hour if played rapidly. If time allows, use up to two hours.

Introducing The Prisoner's Dilemma Simulation Game

Step 1. Warm up the group and announce that the participants will be involved in a simulation game called the "Prisoner's Dilemma." Do not provide information about the model, rules, or purpose of the simulation. It is important to get into the game quickly. Players need the opportunity to discover the meaning of their actions for themselves.

Running The Prisoner's Dilemma Simulation Game

Step 2. Distribute the Scenario Sheet. Go over the situation with the group so that everyone understands it.

Step 3. Distribute the Payoff Chart Sheet and explain the payoffs. Use both the Summary of Probable Penalties and the Payoff Chart. Do not get bogged down here. Be clear and move on. Clarity will come as the activity progresses.

Step 4. Designate one person as your reserve player. This person should be one who could, if need be, serve as Official Game Observer. Right now simply ask him or her to step aside.

Step 5. Ask the remaining participants to pair off and sit back-to-back. Pairs should move their chairs around so that they sit comfortably back-to-back. If there is a person left over, then your extra, reserve person becomes a player. If there is no one left over, then designate your reserve person as Official Game Observer.

Step 6. Announce the rules.

a) No talking or writing to each other until permitted by the game leader.

b) Each player privately decides to confess or not to confess. The player writes the decision on a piece of scrap paper. Player writes only "Confess" or "Not Confess."

c) The goal of this simulation is "Do the best you can." (State the goal this way. Say this and nothing more.)

Step 7. Ask the players to make their first decisions. Each player should write a decision on a piece of paper and pass the paper over his or her shoulder to the other player. Remind the players not to talk to each other.

Step 8. Distribute the Record Sheet now. Ask players to fill in the first row. Check to see that everyone understands how to fill in the Record Sheet properly.

Step 9. Ask the group to continue this process nine more time for a total of ten times. Clearly announce that each person may decide to confess or not to confess during each round since each round is independent of the others. Remind the group that the pattern is: write decision; pass paper; and record decision.

Step 10. When the players have all finished deciding and recording ten rounds, ask the pairs now to face each other and talk together for 3-5 minutes. Direct them to talk about what happened during the ten rounds based on the Scenario Sheet, the Payoff Chart, and their completed Record Sheets.

Step 11. After 3-5 minutes, ask pairs to sit back-to-back again, not to talk to each other, and to repeat the deciding-passing-recording process ten more times for a grand total of twenty times. Remind them to write, pass, and record only one round at a time. Ask them not to talk when they are finished. You may distribute a new copy of the Record Sheet to everyone if you wish.

Step 12. When the players have all finished recording the twentieth decision, ask each person to write on a piece of paper at least three words or phrases to describe his or her impression of the other player during the game. Players should consider only what they know about the other player during the game and discount everything they know prior to the game.

Step 13. When they are finished writing, ask players to face each other, exchange papers, and talk together about their last ten decisions and their impressions of each other.

Debriefing The Prisoner's Dilemma Simulation Game

Step 14. After a few minutes, begin to debrief. Many game leaders claim that this is the most important part of all. Here is the opportunity for the players to find out what the others did, to reflect on what they have done, and to discover what it all means. Here is the opportunity to integrate the game with the group's other learning activities. Therefore, be sure to leave enough time for an adequate debriefing session. A poor debriefing session may yield a distorted picture of what the simulation is all about.

Begin the debriefing by encouraging the group to describe what happened so that players will know what each other did. Let the players "ventilate." Without sufficient airing of the facts of what occurred during the game, there will not be an adequate basis for making discoveries and drawing conclusions later on.

Analyze the messages conveyed by the simulation game. Ask such questions as: What do the results of our activity mean? What led us to get the results we got? What points does this activity make about life that are important?

Examples of questions specifically for the Prisoner's Dilemma: What does this simulation teach us about plea bargaining? Do you approve of the plea bargaining procedure? Why did you talk to the police rather than demand to see your lawyer or remain silent? If you were accused of a crime, what would you consider before talking to the authorities? Is Not Confessing the same as remaining silent? What justification do you have for the decisions you made? What was the effect of sitting back-to-back? What was the effect of talking face-to-face? What values were tested when you were deciding between confessing and not confessing? What did you learn about yourself and the other person? What led you to describe the other player as you did? What does confinement mean to you?

Analyze the simulation model of the game. Compare and contrast the similarity of the activity of the group with events in other parts of their lives. Treat the specific features of the simulation scenario, rules, and sequence of events. Do not assume that the participants realize what the various features of the simulation represent. Ask such questions as: In what ways is the picture presented by this simulation similar to the nongame world? In what ways is this simulation different from the "real" world?

Examples of analysis specifically for the Prisoner's Dilemma: What does sitting back-to-back represent in the real world? What do the written notes represent? What does the conference between Rounds ten and eleven repre-

sent? What do the activities writing and the second face-to-face conference represent? What is the purpose of just saying in the scenario "notifies them of their constitutional rights" rather than listing those rights to you specifically in this simulation? In what ways are communications restricted in your daily lives? What factors create the dilemma in this simulation? What is the best decision in this Prisoner's Dilemma situation given the payoffs listed? Is the American legal system designed to bring justice or to get you to talk so as to finish the case? What would have happened had you been able to talk to each other all along? What would have happened had the penalties been different, say if the penalty were 24 months for both people Not Confessing rather than being only 18 months?

Step 15. Move forward. Before leaving this simulation game behind, launch the group into one of the activities you have explored with them earlier in part of Step 16. Base your decision on the group's preferences and your assessment of the generalizations and conclusions discussed above.

Plan for future discussions and activities that can build upon the experience resulting from the use of any simulation games. Try to launch new activities that spring from this simulation. You can encourage (1) further discussion on the many messages conveyed by this game, (2) doing independent study, (3) refining the simulation in a way appealing to the group, (4) writing other scenarios to fit the same structure of the payoff chart. Examples of future activities for use with the example game are: a field trip to a local jail to interview prisoners or inviting a judge or criminal lawyer to confer with the group. Ask such questions as: If we were to play this game again, what would you change? How can we change this game to make it closer to what the real events are like? What key ideas from this simulation game would you like to pursue in depth?

Summarize, generalize, and conclude. At various spots during the debriefing but especially at the end of a session there is great need for tying points together. The generalizations and conclusions constitute the learning which arises from this simulation game. It is necessary to state them explicitly. Do not assume that students will make generalizations and draw conclusions on their own without guidance. There are a variety of ways this can be accomplished. The following are merely two possibilities.

Request the group first to list some key ideas that have come forth during the discussion, then to offer some generalizations based on these ideas, and finally to draw some conclusions. Ask: From all that we've done and said what conclusions can you draw from this activity?

Or, you can touch off the process of concluding by asking each person to complete the following sentence: "Based on this simulation game I realize that _____." Then have each person or at least a few volunteers read their completed sentences. Once you have out on the floor some conclusions as stated in the "I realize" statements, it is beneficial to inquire into these further for validation. List the conclusions on the chalkboard. Ask if anyone sees any common thread or threads running through these statements. Then ask the participants to identify specifically what in the game and the discussion led them to their conclusions. Ask if the conclusion is valid not only in the simulation but also in the nongame, real world. Finally, ask the students to identify specifically what events and ideas from the real world support the conclusions. Ask if there are events and ideas which oppose the conclusions. The discussion on these conclusions will provide an opportunity for agreement and disagreement among players and thus a motivating spur into one or several future activities built on the session.

Conclusion

Simulations offer an opportunity for college faculty and students to probe together into complex issues which they themselves have enacted. In short, simulations like the Prisoner's Dilemma presented in this article, offer an opportunity for instructors to help students make the connection beteen theory and practice in a sound and motivating way.

Interested faculty should see: Handbook of Simulation Gaming in Social Education by Ron Stadsklev (Institute of Higher Education Research and Services, University of Alabama, Tuscaloosa); Handbook of Games and Simulation Exercises, ed. by G. I. Gibbs (Sage Publications, Beverly Hills) and The Guide to Simulation/Games for Education and Training, ed. by Robert E. Horn (Didactic Systems, Inc., Cranford, N.J.). The journal, Simulation and Games, regularly reviews new simulations in addition to offering articles and research reports on the effectiveness of simulation gaming in the classroom.

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